

Arran High School Mountain Bike Club

Dyemill Skills Trails Project

Ecological Survey Report

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Introduction

SITE DESCRIPTION

The Dyemill Project is a Community Asset transfer site from Forestry & Land Scotland (FLS). The site is out-with the national scenic area and wild land area and no parts are subject to any statutory nature conservation designations. The site comprises of a 6ha strip of mainly young broadleaved trees, with some young, self-seeded Forestry conifers. The highpoint of the site lies at its southern end, with the ground falling at first gradually and then steeply to the north. The woodland is currently owned and actively managed by Forestry & Land Scotland. Mature timber was last harvested around 2010.

PROTECTED SPECIES LEGISLATIVE FRAMEWORK

Many species of animals, birds and plants in the UK are protected or specially protected under the provisions of national or European legislation.

European Protected Species (EPS) are protected under Directive 92/43/EEC, the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive) and Directive 79/409/EEC, the Conservation of Wild Birds (the Birds Directive).

All previous European directives are, since 01.01.2021, now covered by the Habitats Regulations in Scotland

The Habitats Directive

The Habitats Regulations in Scotland aims to contribute to the conservation of biodiversity by requiring Ministers to take measures designed to maintain or restore certain natural habitats and wild species at a favourable conservation status in Scotland, giving effect to both site and species protection objectives. The Regulations transposes the Bern Convention on European Wildlife and Natural Habitats into Scots law.

The Habitat and Birds Directive Scotland

The Habitat and Birds Directive applies to birds, their eggs, nests and habitats and supercedes European regulations after 01.01.2021. The Scottish Government agreed to maintain or improve the current European directive. It provides for the protection, management and control of all species of naturally occurring wild birds in Scotland the European. It requires Ministers to take sufficient measures to preserve a sufficient diversity of habitats for all species of wild birds naturally occurring within Scotland in order to maintain populations at ecologically and sound levels, and requires Ministers to take special measures to conserve the habitat of certain particularly rare species and of migratory species.

Protected Species

PS most commonly encountered by the land based construction and development industry on Arran are :-

- Badger
- Bats, Typical (all species)
- Common Otter
- Common Lizard
- Slow Worm
- Red Squirrel

UK National Legislation

Principal UK legislation conferring protection on various species includes the Wildlife and Countryside Act 1981 (as amended in Scotland by the Nature Conservation (Scotland) Act 2004) and the Badgers Act 1992. Recent amendments to these Acts now apply in England and Wales under the Natural Environment and Rural Communities Act 2006 and the Habitats and Birds Regulations in Scotland.

Identification of the species themselves and just as important, habitats capable of supporting them requires specialist knowledge and in some cases licences issued by Scottish Natural Heritage (SNH) may be required in order to carry out surveys.

Biodiversity

North Ayrshire Council has prepared a **NORTH AYRSHIRE Local Biodiversity Action Plan 2019-2031** and full consideration has been given to the objectives and priorities contained in this plan during the preparation of this report.

SURVEY STRATEGY

Following consultation with FLS staff and in view of the surveyor's extensive local knowledge of the area and the Biodiversity Action Plan the following species have been targeted for consideration and survey where deemed appropriate:

- Otter (*Lutra lutra*) EPS
- Bats, Pipistrelle (*Pipistrellus pipistrellus*), Daubenton's (*Myotis daubentonii*), Brown long eared (*Plecotus auritus*) Leisler's Bat (*Nyctalus Leisleri*)
- Red squirrel (*Sciurus vulgaris*)

- Badger (*Meles meles*)
Slow worm & Common Lizard

All of the above species have been selected as key species in the **NORTH AYRSHIRE Local Biodiversity Action Plan 2019-2031**

A general assessment of the habitats in the proposed development area including birds and ground flora has also been undertaken.

OTTERS

Otter Survey Methodology

Otters are protected by the Wildlife and Countryside Act (Schedule 5) 1981 as amended by the Nature Conservation (Scotland) Act 2004. Otters are also a European Protected Species protected by Annex IV of the EC Habitats Directive 1994 as an animal species of Community interest in need of strict protection. European Directives are now superseded by The Habitat Regulations in Scotland.

Following a period of decline Otters on Arran have made a steady increase in the last thirty years and can be regularly seen in many quiet locations on the island. The species is generally nocturnal although sightings may be made during daylight hours in areas that are free from disturbance. There are no known recent records of otters within the Dyemill area although they may pass through along the Monamore Burn.

A basic otter survey was carried out in February 2021 along the Monamore Burn from Dyemill through to its exit into Lamlash Bay. There were no sightings or signs of otter habitation or usage. Lamlash Bay is very well used for water sports and fishing with a large grass area at the sea side, which is used extensively by local people and summer visitors. It is very popular with dog walkers which is thought to hinder otter activity. Arran does have a resident otter population but, being a shy creature they are rarely seen near the larger villages.

Indicators used for confirming the presence of otters are;

- The presence of ‘spraints’ – the very characteristic droppings of the otter usually deposited in a visible place such as on a large stone or under a bridge,
- Likely holt sites – no area was deemed suitable.
In quieter areas the species is occasionally seen during the day, regularly in Kildonan.
- The presence of tracks or paw prints – often seen in mud or sand along the water’s edge or at regular crossing points,
- The presence of slides – otters are playful animals often using slides to enter the water from higher banks.
- The presence of couches – day beds used by otters often in dense vegetation within the riparian zone.

Evaluation of Otter Resource

No direct sightings of otters were made during the survey but due to the generally secretive nature of the species this was not unexpected.

Due to the stony nature and flow of the Monamore Burn were few areas of exposed soft substrate where one might have expected to find otter footprints. No otter prints were found but given the water speed of the burn that would be expected. Similarly, no spraints were observed.

. In addition there is public access along the adjacent track that is frequently used by pedestrians and dog walkers. There is a well used car park at the Dyemill entrance and the resultant level of disturbance would undoubtedly make this area unattractive to otters.

No direct or indirect evidence of otters was found in the vicinity of the development. Given that no reports of the species have been received either from members of the public or FLS staff it seem highly unlikely that otters are regularly present in the area, although they may at times pass through the area either hunting or en-route to other feeding areas.

Pictures 1 & 2

Impact Assessment

It is considered that the installation and operation of the Dyemill Project facility will have no negative impact on the local otter population as there is no direct or even anecdotal evidence to suggest that the species is currently present in the area.

BATS

Assessment of Bat Resource

Bats are protected under Habitats Regulations in Scotland. As a protected species the key protection, other than a prohibition on killing or taking them relates to the protection of their breeding or resting sites (even when not in occupation) and protection from disturbance, particularly in relation to activities that impair their ability to survive & breed. In addition it is an offence to disturb such an animal in a manner that is, or in circumstances which are likely to significantly affect the local distribution or abundance of the species to which it belongs.

Desktop Analysis

Local bat populations had been monitored for many years on Arran by the now defunct Arran Bat Group. The National Trust for Scotland has a resident Bat expert. There are a number of the three types of pipistrelle bat on Arran, as well as the Common Long-eared Bat, Daubendon's Bat and there is now evidence of Leisler's Bat. The Project site was a conifer plantation clear felled around 2010 and the self-seeded, immature broadleaf trees now on the Dyemill site do not provide suitable opportunities for bat roosts. Pictures 5 & 7. Similarly, nearby closed canopy coniferous woodland is not a favourable foraging habitat but may contain roosts. Picture 3. The small pond on site may encourage a flying insect population to feed on occasion but is thought to be too small to be of much significance for bats at present.

Constraints on study information.

I consider that there were no constraints to accurately assessing bat use of the site during the survey period. All of the site could be accessed to very high degree and the use of torch and bat detectors enabled a high level of certainty to be expressed over the results regarding bat use of the site. Weather conditions were satisfactory and the presence of insects, albeit

in small numbers, indicated that bats were likely to be on the wing and detectable if present. The surveyors were suitably equipped and experienced and the surveyors were able to cover the site and concentrate on key hotspots of bat activity as appropriate.

Impact Assessment

The proposed trails would have little effect on any bat feeding areas, and as bats tend to feed in corridors at night, when the trails will be little used, the probability is that the opening up of trail corridors will actually be beneficial for bats. The proposal includes a small 50 x 70 metre pump track area which would have little, to no vegetation and would have lights for use during the winter evenings. That lights have a detrimental effect on bats is known but as the pump track lights will only be used during the dark winter months (Greenwich Mean Time) and only up to an hour at a time, this should not affect bats. Tree felling in the nesting bird season is to be avoided (April-September). In the unlikely event that any bats are encountered during tree felling then advice should be sought from a licensed bat worker.

RED SQUIRRELS

Red Squirrel Survey Methodology

Red squirrels are afforded protection under the Wildlife and Countryside Act 1981 as amended by the Nature Conservation (Scotland) Act 2004.

Red squirrels are abundant on Arran and the population has been steadily increasing since the 1980's. At present a nearby area does have Red Squirrel in amongst its large mature trees. Picture 4. This is separated from the project site by a FLS plantation of Hemlock and Spruce, FLS access tracks, the Monamore Burn and car parking. The project area does not have sufficiently mature enough trees to support Red Squirrel, although they may forage locally and en-route to other feeding areas.

The survey was carried out on 26.04.2021 over two hours in dry, bright conditions with good visibility. A ground level visual inspection was undertaken of trees proposed for removal as well as adjacent trees to be retained.

Red squirrels build nests either as nurseries where their young are born and reared or as sites where they habitually rest. These nests can either be found in cavities in broadleaved trees, or more typically in Scotland, in the crowns of a variety of coniferous tree species. Resting dreys are often constructed using the disused nests of certain bird species e.g crows and wood pigeon. There are no suitable mature broadleaved trees on the project site offering the opportunity for cavity located or suitable old bird nest.

No red squirrels were directly observed during the survey.

A thorough search of the trees in the areas containing the proposed development site did not identify any trees suitable for squirrel dreys. Although there were several suitable cone-

bearing trees within the site area they were considered too small to produce good crops of cones.

Evaluation of Red Squirrel Resource

Red Squirrels are seen regularly over much of Arran and have spread to all wooded and village areas. Arran has a nationally significant population of Red Squirrels. With the future planting of indigenous Scottish trees within the Dyemill Project it is hoped that Red Squirrel will be encouraged to populate the area.

Impact Assessment

The survey failed to reveal any evidence of recent red squirrel activity in the area of the proposed development and it is considered that the loss of a relatively small number of immature trees will not have any significant negative impact on the Arran population of red squirrels in the park. Pictures 5 & 7

BADGERS

Badger Survey Methodology

Badgers are afforded protection under the Protection of Badgers Act 1992 as amended by the Nature Conservation (Scotland) Act 2004.

Badgers are a locally common species living in family setts. Frequently there is a main sett, often used as a breeding site with one or more 'annex' setts. Badgers are sociable animals, extremely site faithful and well-established setts have usually been in existence for many years. Badgers are generally nocturnal and creatures of habit leaving their setts at dusk and following well trodden paths to their feeding grounds. There is evidence of sett around one mile from the Project site.

Ideal badger habitat contains short grass pasture capable of supporting around 40,000 earthworms per hectare with adjacent deciduous woodland and hedgerows for plant food and bedding materials with unimproved grassland for invertebrates and small mammals..

The main indicators used to detect their presence are;

- The presence of setts – main setts are generally highly visible with large amounts of excavated soil and bedding material at the hole entrances. The holes are larger than in rabbit burrows, at least 250mm in diameter, typically 300-350mm
- The presence of latrines – badgers are notoriously clean animals and generally deposit their droppings in groups of pits known as latrines. These can be some distance away from the setts.
- Foraging areas – badgers are omnivorous, opportunistic and will eat a variety of plant and animal food and good Indicators of their presence are digs and scrapes in woodlands and pastures.
- . • Paths between setts or leading to feeding areas.
- Snuffle holes - holes in the ground where badgers dig for food.
- Paw prints and tracks – badgers leave unmistakable paw prints in soft ground
- The presence of body hairs – badgers have long grey, black and white body hairs

that are often caught on obstacles under which they pass e.g. fence wires.

- Scratching posts – badgers often have favourite scratching posts such as fallen trees where they sharpen and clean their long claws leaving characteristic gouge marks.

A survey was undertaken on the 26.04.2021 over two hours in dry, bright conditions and no evidence was found of badger activity as above.

Evaluation of Badger Resource

Arran has a large but fluctuating number of badgers over the whole island. There have been no sightings of badgers on the proposed site. However, there are large tracts of cattle pasture at nearby Glenkiln Farm which are ideal foraging habitat for badgers and it is likely that these areas will be far more attractive than the site woodland.

Impact Assessment

There are no active setts within or immediately adjacent to the proposed Dyemill site and given that badgers are essentially nocturnal it is considered that the development will not result in any significant negative impact on the species. SNH recommends a 30m exclusion zone around setts and the Dyemill site is well out-with this limit, therefore, badgers do not present a constraint on the proposed development.

SLOW WORMS AND LIZARDS

Both these lizard species are present on Arran and are protected under The Habitats Regulations in Scotland. Both species are uncommon and very difficult to locate, making a moderate survey hard to accomplish. There have been no known sightings on the project site but some areas may be suitable for both species.

Impact assessment

As neither species has been seen on site it is difficult to ascertain any impact on both species. There are a number of places on site that may be suitable habitat for them. To enhance the prospect of assisting with habitat for the lizards it is proposed that rocks found on site will be piled in some places to create suitable environments, which may require drainage channels in some areas at the north of the site.

GENERAL ECOLOGICAL ASSESSMENT

The general woodland environment within and around the proposed Dyemill Project site is unremarkable other than to see pioneer species trees re-seeding slowly, after clear fell by FLS some years ago.

All of the land has impoverished ground flora due to the poor ground conditions. Mosses are present near the small pond and there will be a need to remove quantities of bramble, gorse and bracken. Shore Juniper is present at the highest point and will not be affected. There is heather sparsely spread over parts of the site but this will be largely unaffected. Opportunities for ground or scrub nesting birds are limited to the southern higher part of the site and no birds were observed at this level during the survey.

A number of common passerine bird species were recorded by direct observation, including migratory species.

Impact Assessment

The woodland habitats proposed for the Dyemill Project are robust and not likely to be compromised by the development and in fact, in the long term the aim is to re-forest with local timber species creating diversity and giving more feeding opportunities for wild life.

In order to facilitate the construction of the facility up to 400 saplings and young trees will be removed, mainly to the dense north lower section. These comprise mainly of young Birch, Rowan and Goat Willow. All Spruce, Fir, Hemlock and non-native Pine will also be removed. These are not of significant size. Timber and undergrowth will only be removed for the trails and will have little visual impact due to the density of the current new growth. All removed timber will be utilised in suitable ways to assist with the project or will be left to encourage insect species as part of the natural food chain.

None of these trees are of any particular ecological significance and their loss will have no material impact on biodiversity. There is a stand of around 30 Sycamore trees, approximately 30 – 40 years old and these should be removed eventually in order to prevent shading of Oak saplings underneath. No timber felling will take place during nesting season.

The Dyemill Project site area has a light usage, mainly dog walkers and mountain biking, with nearby trails being much more popular for walkers.

MITIGATION

Although the proposed development is not likely to result in any significant negative impacts requiring specific mitigation, the overall woodland biodiversity could be improved by employing some simple measures.

All non-indigenous trees should be removed and replaced with Scottish trees such as European Larch, Scots Pine, Oak, Wych Elm, Gean and Ash, which would produce a good food source for Red Squirrels and various bird life. The current broadleaf trees comprises mainly of Rowan, Birches, Goat Willow, young and older Sycamore and Oak saplings. It is hoped to re-introduce Sorbus Arrensis, (Arran Whitebeam), and Aspen Poplar to the area. Re-planting would require fencing to prevent Red Deer degradation. There is evidence of Red Deer resting amongst bracken on the higher section of the project site. These are escapees from the North Arran deer forest and are eliminated by FLS when possible.

A variety of bird boxes would boost the breeding success of a number of hole nesting species as natural tree holes are in short supply.

Owl boxes would not be appropriate as the trees are too small at present. Bat boxes may encourage roosts as there are feeding grounds at the small pond on the site, a small pond to the southwest and the Monamore Burn. Some of the timber removed could be used for these boxes. It is thought that AHS pupils might build them as a cross curricular activity.

Re-generating the biodiversity pond.

The area around the pond will be cleared of brambles, gorse and bracken and any other hazards around 75% of its perimeter, leaving shade from trees on the remaining 25%, in order to encourage insect populations and toad and newt species. It is envisaged that local schools will be able to use the pond for outdoor learning and will encourage children and young adults to actively become involved with upkeep of the pond area, as well as other

parts of the project. There is a possibility that larger stones and rocks near the pond could be stacked to encourage lizard habitat but the surrounding area is very wet and will need some drainage work in order to facilitate all of the above.

CONCLUSION

The essence of North Ayrshire Local Biodiversity Action Plan 2019-2031 can be expressed as three central aims, based on those of the Scottish Biodiversity Strategy “2020 Challenge for Scotland’s Biodiversity” (2013):

1. Protect and restore biodiversity on land and seas, and to support healthier ecosystems
2. Connect people with the natural world, for their health and well-being and to involve them more in decisions about their environment
3. Maximise the benefits for North Ayrshire of a diverse natural environment and the services it provides, contributing to sustainable economic growth.

The ‘Dyemill Skills Trails’ proposal meets all three aims and is unlikely to have any adverse impact on the overall nature conservation interest of the area and the provision of the mitigation measures outlined above will result in a net biodiversity gain.



